

# **Boundary Unit 53 – Schedule & Contracting Update October, 2013**





## Unit 53 Scope of Work

### Seattle City Light Work

- Rotor Removal and Generator Disassembly
- Turbine Disassembly & Removal
- Stationary Turbine Parts
- Wicket Gates
- Turbine Reassembly
- Set Generator Rotor and Align Machine and Core

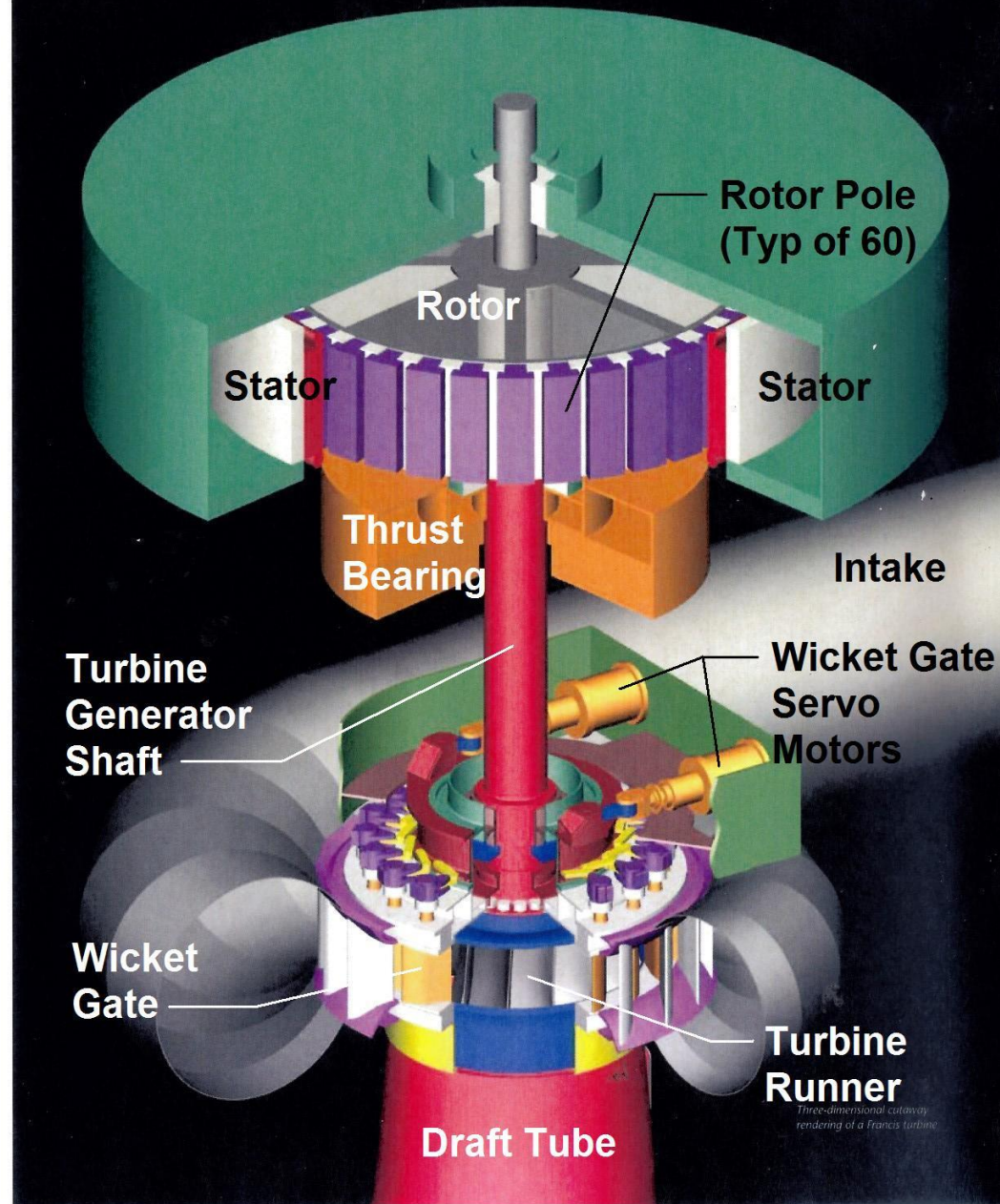
### Alstom Work

- Remove Old Stator Winding/Core
- Install New Stator Core (Stacking Steel Plates)
- Install New Stator Windings and Make Connections
- Assemble Rotor and Make Connections

### Joint

- Condition Monitoring of Systems
- Commissioning and Testing

## GENERATOR





**Generator Disassembly: Combined work where SCL performs general disassembly but Alstom removes the stator core/windings. Alstom would perform Main and Neutral lead removal as shown here.**





**Turbine Disassembly (SCL Work): Turbine shaft shown. Workers are removing the last of work deck supports—one of the workers is standing on the Wicket gate shift ring regulator**



# Turbine Disassembly (SCL Work): Placing Runner on floor of Powerhouse





## Seal Rings (SCL Work)

Lower Runner seal ring being drilled for attachment




Upper Runner seal ring being installed, checking fit



**Wicket Gates (SCL Work) –  
Original condition of Unit 55  
wicket gate arms shown**






A large, circular industrial rotor assembly is shown in a factory setting. The assembly consists of a central hub with a blue base and a red upper section. The hub is surrounded by a large, circular, dark-colored outer ring. The top surface of the ring is white with yellow triangular markings. In the background, there is a white building with windows and a yellow forklift. Several orange and white striped safety cones are visible in the foreground. The text "Rotor Assembly - Individual Rotor Poles will be placed around the perimeter of the Assembly" is overlaid on the image.

**Rotor Assembly - Individual Rotor Poles will be placed around the perimeter of the Assembly**





**Inside the Stator looking at old  
laminations – Removal by Alstom**



**Alstom work – Stacking of  
new Stator Laminations  
(core steel)**





# **Status of Contract with Alstom**

## **Contract Value:**

\$10,740,000 (pre-tax)

## **Total Liability:**

Parties agreed to balanced language with no consequential damages

## **Remedies:**

Liquidated Damages: \$15K/day after 10-day grace to 10% cap.

Warranty: 3 Years (industry standard)

Insurance: Per City Standard incl. Pollution Liability.

## **Other Alstom/SCL Coordination**

- Options for some ancillary work from Alstom being discussed
- Pre-construction meeting held Thursday, September 19<sup>th</sup> at Boundary
- Contract terms completed November 7; Alstom began site work on November 12
- Alstom submitted a robust (Environmental, Health, Safety) EHS plan – very important to SCL



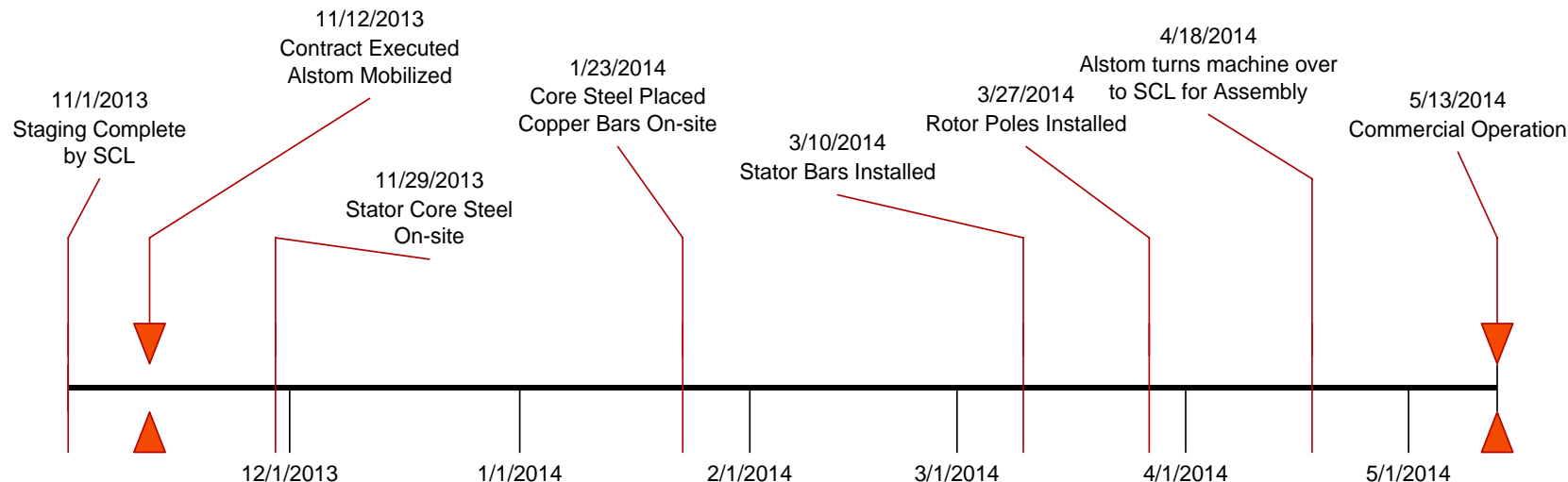
# **Status of Alstom Manufacturing**

- Alstom design of major components complete – SCL engineers made quick decisions to support this work
- Delivery of materials on schedule including critical steel materials from Europe
- Alstom manufacturing on schedule (including their subcontractors)

## **Spring Runoff Conditions – Last 4 Years**

Runoff Year	Date Runoff Started	Duration - days
2010	June 5 <sup>th</sup>	32
2011	May 12 <sup>th</sup>	79
2012	April 22 <sup>nd</sup>	90
2013	May 11 <sup>th</sup>	45





11/1/2013

5/13/2014

## High Level Risk Summary and Mitigation Efforts

The timeline on this outage is very tight in order to complete the work in time for the 2014 spring run-off. Contract negotiation and execution, scheduling of work for the contractor and City staff and timely completion of all tasks is critical to the success of this project. SCL is addressing these risks as follows:

### **Timely Contract Execution:**

1. Accelerated negotiation of an emergency contract – completed on November 7, 2013.

### **Timely Completion of SCL Scope of Work:**

1. Machine was prepared for contractor mobilization and crews will be scheduled for 2x10 shifts, 6-days per week
2. Tooling requirements are staged and spares will be available
3. Crews completed a mechanical overhaul of the machine recently which means few, if any, unknowns
4. Portions of the SCL scope are scalable if necessary

### **Timely Completion of Contractor's Scope of Work:**

1. Contractor will work 2x10 shifts, 6-days per week, SCL staff will be assigned to provide support directly to the contractor
2. Contract terms and conditions include liquidated damages to ensure Contractor shares the risk and is focused on the completion deadline
3. Continuous oversight of contractor activities (daily reports, weekly on-site meetings)